

Annex A

Pedal Cyclist Casualties Update

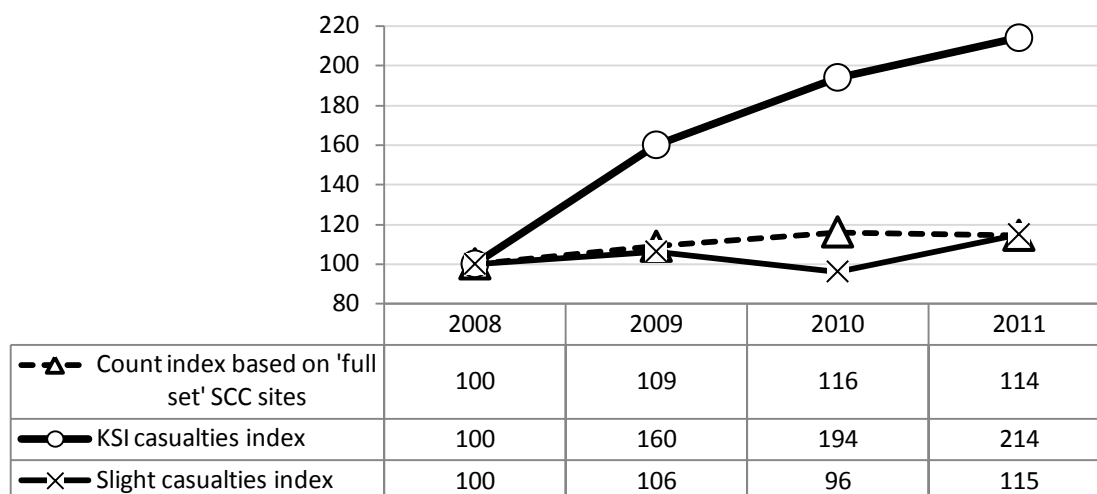
Version 3, 29th March 2012

Summary	page 2
Recommendations	page 3
Contents of main report	page 4

Summary

1. The number of cyclists seriously injured rose from 49 in 2008 to 106 in 2011.
2. Fatal casualties have remained low: 1 in 2008, 1 in 2011.
3. Slight casualties rose from 367 in 2008 to 422 in 2011.

Index of number of cyclists and cyclist casualties



Source of cycle count data: Surrey CC automatic counter sites

4. Although overall the level of cycling has increased since 2008, there is a wide variation at different County count sites, suggesting we should not assume a simple direct relationship between the level of cycling and casualties for the County overall. KSI casualties have not increased in Woking cycle town, despite an increase in cycling there.
5. Two types of crash together account for (a) 75% of the increase in KSI casualties 2008-2011 and (b) 57% of the total KSI casualties in 2011¹:
 - a. “No other road user involved or collided with cycling companion”. In addition, the actual number of this type of casualty appears to be far greater than the number reported to police.
 - b. “Vehicle emerges from 'give way' junction or private access into path of cyclist”.
6. Both of these crash types are amenable to Drive Smart interventions.
7. This report has five recommendations for what to do next, set out on the next page.

¹ When casualties where “description is not clear” are excluded.

Recommendations

The following recommendations arise directly from the data analysed in this report. They include both immediate actions to address the increase in cycle casualties and longer-term measures to improve the basis on which we take action.

What and why	How
<p>1. Make a Drive Smart intervention around “cycle-only” casualties. <i>38% of all cyclists killed or seriously injured in 2011 had this type of crash.</i></p>	<ol style="list-style-type: none"> 1. Awareness campaign aimed at cyclists 2. Self-help online resources to improve cycling technique 3. Promote Bikeability training 4. Investigate synergy with motorcycle campaigns
<p>2. Make a Drive Smart intervention around “vehicles emerging from junctions into the path of cyclists”. <i>19% of all killed or seriously injured cyclists result from this type of crash.</i></p>	<ol style="list-style-type: none"> 1. Awareness aimed at all road users 2. Self-help online resources to improve cycling technique 3. Promote Bikeability training 4. Investigate synergy with motorcycle campaigns
<p>3. Compare and review reporting policy on “cycle only” casualties and how we use hospital data. <i>Surrey reports many more ‘cycle only’ casualties than other areas; we need to check if our reporting policy is consistent. As only a minority of such crashes are recorded, we need to decide if we instead should use hospital records as a basis for action.</i></p>	<ol style="list-style-type: none"> 1. Benchmark reporting policy against other police forces. 2. If further investigation determines that Surrey does have a particularly high incidence of cycle-only casualties, then the causes should be established. 3. Investigate the availability and usefulness of local hospital data.
<p>4. Improve our own understanding of cycle journeys. <i>If we had more accurate information about cycle flows in different parts of the County, journey lengths, user experiences and perceptions, we could improve our interpretation of casualty data and therefore our interventions.</i></p>	<ol style="list-style-type: none"> 1. More quantitative data through automatic counters and user questionnaires. 2. More qualitative data through user feedback. 3. Sustained data collection programme to build a useful record.
<p>5. Review design standards for cycle facilities at junctions and audit future schemes to these standards. <i>So we can be sure that cycle facilities contribute to reducing casualties at junctions rather than increasing conflict.</i></p>	<ol style="list-style-type: none"> 1. In-house review. 2. Any updated standards could then be applied in existing programmes, such as LSTF, local improvements development-related schemes and safety engineering.

1. Casualty numbers and trends	51
2. A systematic increase or a random fluctuation?	52
3. Levels of cycling: our knowledge is limited	52
4. Previously established characteristics of cyclist casualties	54
5. Two crash types could be a priority for Drive Smart	55
6. Interventions to address the two crash types	58
7. Other factors (no recorded casualty increase in Woking)	58
Annex 1: casualty numbers and trends	60
Annex 2: cycle count data in Surrey	63
Annex 3: crash types.....	65
Annex 5: casualty location maps	73
Annex 6: other vehicle involved in crashes where cyclist was injured, all severities, 2008 to 2011	74

1. Casualty numbers and trends

Period covered

Generally, data from 2008 to 2011 have been used, except for national comparisons, where data available at time of writing are to 2010.

Casualty Severity

The convention to split casualties into ‘killed or seriously injured’ (KSIs) and ‘slights’ is followed here. The numbers of cyclists killed since 2008 are:

2008	2009	2010	2011
1	2	4	1

Therefore almost all of the cyclists in the KSI category in this report are serious casualties.

Cyclist casualties in Surrey 2008-2011

Annex 1 tables 1 and 2, show 529 cyclist casualties in 2011 compared to 417 in 2008. This is an increase of 112 or 27%. The number of KSI cyclists has increased by 57 whilst the number slightly injured has increased by 55.

Cyclist casualties in Surrey since 1994

Annex 1 table 3 shows the numbers of cyclist KSI and slight casualties 1994 to 2011. From 1994, KSI casualties generally decreased to 2003, since when they have risen to return to the level of 1994. Slight casualties decreased until 2002; since then they have increased but not to their former levels.

Other road user casualties in Surrey since 1994

Annex 1 table 4 shows the numbers of KSI and slight casualties, excluding cyclists, from 1994 to 2011. Both categories have generally decreased over the whole period but with a small increase in 2011. While other casualties have generally decreased, cyclist KSI casualties have risen, which means they now comprise a noticeably greater proportion of all KSI casualties – from 9% in 2008 to 18% in 2011.

Surrey compared to other areas

Annex 1 table 5 compares the Surrey cyclist KSI casualties with those of all of Great Britain, indexed against a 1994-1998 average. GB cyclist KSI casualties have shown a consistent rise from 2003 to 2010, but in the last two years the rise in Surrey has been much steeper.

Annex 1 table 6 shows the reduction, by police force area, for cyclist KSI casualties for 2010 against a 2005-2009 baseline. For cyclists, Surrey is ranked 50th out of 50 police areas.

Annex 1 table 7 shows the reduction, by police force area, for all KSI casualties for 2010 against a 2005-2009 baseline. For all users, Surrey is ranked 44th out of 50 police areas.

Annex 1 table 8 shows the reduction, by police force area, for all KSI casualties excluding cyclists for 2010 against a 2005-2009 baseline. For all users, Surrey is ranked 39th out of 50 police areas.

2. A systematic increase or a random fluctuation?

It seems likely that the increase in KSI casualties is a systematic change and this would be a reasonable working conclusion. However, it is possible that it results from more random shorter-term fluctuations; it will be worth considering this when evaluating changes in the future.

Factors suggesting systematic increase

- Numbers for other road users have decreased over the same.
- There is still an increase if a standard 5-year baseline is used rather than just 2008. The average annual number of cyclist KSIs for 2005-2009, the baseline period now used by DfT, is 61.
- Cyclist casualties have been rising across the country in general.

Factors suggesting a random fluctuation

- The reporting of one of the main factors causing the increase, ie, cyclist casualty with no other vehicle involved, may be quite variable, even if its real-life incidence is not.
 - Cyclist casualties have shown variations in the past.
 - The numbers are relatively small and small numbers fluctuate more.
-

3. Levels of cycling: our knowledge is limited

Surrey data collected by the County and DfT

The County has 17 automatic cycle counter points, 8 of which have had data collected 2008-2011 at similar intervals to make them suitable for comparison:

Site	2008	2009	2010	2011	Grand Total	Percent Change 2008-2011
Bramley, Downs link	258	334	354	347	1293	34%
Guildford Epsom Road	340	360	371	383	1454	13%
Guildford London Road	365	373	422	382	1542	5%
Guildford Shalford Park	290	304	319	333	1246	15%
Guildford Worplesdon Road	168	173	153	165	659	-2%
Woking Chertsey Road	119	123	141	149	532	25%
Woking Chobham Road	185	202	218	203	808	10%
Woking south Guildford Road	144	166	192	176	678	22%
Grand Total	1869	2035	2170	2138	8212	14%

The table in the summary at the start of this report shows the total change by year indexed against casualties. Figures for the other automatic counter sites are shown in [Annex 2](#).

Manual count data collected by the County are filed but have not been collated for this report due to time constraints. More detailed data exist for Woking, including town centre cordons and school cycle parking counts; the methodology used could be a model for other parts of Surrey.

[Annex 2](#) also shows data from Department for Transport (DfT) sites. These figures also report noticeable year-to-year variability in cycle flows across a more widely-distributed set of sites in the County.

The relation between numbers of cyclists and casualties

The count data don't allow a simple conclusion to be drawn about the relationship between levels of cycling and cyclist casualties for Surrey as whole:

- Data collection hasn't been consistent year-to-year.
- Data aren't collected for long enough periods at sites to assess the impact of seasonality.
- The change in cycle flows at the County sites varies widely– from +34% to -2%.

Perhaps what these figures demonstrate more than anything is our limited understanding of people's behaviour: who cycles, where they cycle and how they decide whether or not to cycle. A better profiling of the cycling population could lead us to a better understanding of some of the human factors determining risk and the numbers of casualties.

At the time of writing this report, articles in national media suggests that cycle fatalities increase during a recession (comparing 1930 and 1980 to the current economic situation) and that this is correlated to an increase cycling. However, there is no systematic research that looks at actual levels of use and other factors that might have been in play during these periods.

Data relating to journey lengths in Surrey are very limited. School census allows an estimation of the distances of those who cycle to school – just over 2km for secondary school students in 2010² – but apart from that there are no local figures available.

² Source: school census

4. Previously established characteristics of cyclist casualties

In 2009, the County's road safety data working group produced "Data Summary for 2004-2008: Casualties who were cyclists", which summarised the outstanding characteristics of cyclist casualties over that five-year period. These are reproduced below in italics with commentary for 2008-2011 following each point:

- 36% of cyclists are injured on urban 'C' or 'D' roads compared to 17% for all casualties.*

In 2011, this proportion had decreased to 29%. Between 2008 and 2011 there has been a shift towards rural casualties (although more class A and B roads than class C and D), which in 2011 comprised 30% of all cyclist casualties as opposed to 23% in 2008. Of cyclists who were injured in the circumstance "No other road user involved or collided with cycling companion" (see section 6), 43% were in a rural area; whereas of those injured when "vehicle emerges from 'give way' junction or private access into path of cyclist", 25% were in a rural area.
- The peak age group for cyclist casualties is 10-14 (13% of all cycle casualties) years compared to 15-19 for all casualties.*

As the following table shows, the proportion of cyclist casualties in the 10-14 age group has now reduced:

Age Group	2008	2009	2010	2011
0-4	0%	0%	0%	0%
5-9	1%	3%	2%	4%
10-14	11%	11%	7%	7%
15-19	11%	10%	12%	11%
20-24	7%	6%	9%	8%
25-29	9%	10%	6%	10%
30-34	8%	10%	7%	10%
35-39	11%	11%	11%	11%
40-44	12%	9%	10%	9%
45-49	7%	9%	8%	9%
50-54	5%	7%	7%	5%
55-59	5%	3%	5%	4%
60-64	3%	3%	3%	3%
65-69	2%	1%	2%	1%
70-74	2%	1%	1%	1%
75-79	1%	1%	1%	1%
80-84	0%	1%	0%	1%
85-89	0%	1%	0%	0%
95-99	5%	5%	8%	5%
Total	100%	100%	100%	100%

As our understanding of the patterns of cycling is limited, it is not possible to be sure that this is due to changing numbers of cyclists in the different age groups.

- *71% of cyclist casualties are at junctions compared to 54% of all casualties.*
In 2009, 2010 and 2011, 67%, 65% and 67% respectively of cyclist casualties were at junctions, so this appears to be a consistent incidence.
- *59% of cyclist casualties are within 2km of their home postcode compared to 39% of all casualties (for casualties with a home postcode within Surrey).*
The figures for 2009 and 2010 are 57% and 58% respectively, so there is no change in this characteristic.
- *65% of cyclist casualties occur in dry, light conditions compared to 48% for all casualties.*
The figures for 2009 and 2010 are 68% and 65% respectively, so this also appears to be a consistent incidence. No figure for 2011 was available at time of writing.
- *Hospital admissions data show that almost three-quarters of serious cyclist injuries are 'non-crash transport accident' or 'crash with fixed/stationary object'; that is, they do not involve a crash with another vehicle or pedestrian.*
See section 6.

5. Two crash types could be a priority for Drive Smart

The breakdown of cyclist casualty data that has been most revealing is that by **crash type**. Crash type is not a Stats19 category but has been derived from the crash description³. A crash type category has been applied to all 1,866 pedal cyclist casualties from 2008 to 2011:

- Annex 3 table 1 shows the crash type and number of each type by year for all severities;
- Annex 3 table 2 shows the crash type and number of each type by year for all killed and seriously injured casualties.

The two main categories are “No other road user involved or collided with cycling companion” and “Vehicle emerges from 'give way' junction or private access into path of cyclist”, accounting for 38% and 19% of KSI casualties respectively in 2011, where “description not clear” is excluded from the total.

³ The crash types were based on a method used by TfL in an analysis of cyclist casualties in London.
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Furthermore, of the increase of 57 KSI casualties in 2011 (including the “description not clear” category) compared to 2008, 39 are one of the above two crash types:

Crash types	Number KSIs 2008	Number KSIs 2011	Increase
No other road user involved or collided with cycling companion	13	38	25
Vehicle emerges from 'give way' junction or private access into path of cyclist	5	19	14

The following sections explore these crash types in more detail.

Crash type: “No other road user involved or collided with cycling companion”

Crash sub-types

As explained above, over one-third of all KSI casualties are in the category “No other road user involved or collided with cycling companion”. There are different types of casualty causation within this category, so a further categorisation has been undertaken. [Annex 3 table 3](#) shows the results for all severities and for KSI casualties. There is no one major type of incident but rather there is a spread of them: collided with cycling companion, road surface irregularity, slippery surface (leaves, ice, debris), collided with fixed object inc. kerb, lost control at speed or whilst braking, mechanical failure, crossing between footway and carriageway, alcohol-impaired, foreign object caught in wheel and health event (blackout etc).

It may be that the main cause of these incidents relate to an individual not looking ahead, going at an inappropriate speed, choosing a bad road position, poor bike maintenance and so on. This in turn will be influenced by experience, ability and concentration. For some of the casualties, the condition of the road may have been more of a cause than human factors.

Real-life incidence versus police records

The actual incidence of this type of crash is far greater than the number reported to police. [Annex 3 table 4](#) shows the results of a comparison made by DfT between STATS19 figures and A&E admissions. In England in 2010, 7% of police-recorded serious cyclist injuries did not involve another vehicle, but for A&E admissions this figure was 62%.

Currently we have no equivalent data for Surrey itself, eg, by PCT; at the moment, it is not known if this is obtainable⁴. Also it is also not known what proportion of A&E casualties were cycling on the road.

⁴ A request has been submitted to DfT.

Incidence of this type of crash in Surrey compared to other locations

Although 'crash type' isn't a STATS19 field, a reasonable comparison can be made with other areas by looking at crashes with only one vehicle involved, where that vehicle was a pedal cycle⁵. The results are shown in [Annex 3 table 5](#), by police force. Surrey has the largest number of cyclist-only crashes outside of London and at least double that of any other Police Force in the south-east. It has the greatest proportion of cycle-only crashes of any police force.

There may be one of three reasons for this:

1. Surrey has a greater number of cyclist-only crashes – if so, the reason why needs to be established;
2. The reporting policy of Surrey Police compared to other Forces means that a greater proportion of such crashes are recorded into STATS19 records;
3. As the previous section explained, only a minority of cycle-only injuries are reported to the police, so it may be that for some reason people in Surrey involve the police more than other areas. The police attended the scene in almost 92% of this incidence of crash type in Surrey, the remainder being self-reported.

Time and Location

As explained in section 5, 43% of these types of crash are in rural areas, compared to 30% for all cyclist KSI casualties. This may indicate that they are associated more with leisure cycling. [Annex 3 table 6](#) compares the days of the week in which these crashes occur compared to all cyclist casualties; 50% of this crash type occurred at the weekend compared to 27% for all cyclist casualties in 2011. This again may indicate an association with leisure cycling. Cyclist casualties are seasonal, peaking in the second quarter as shown by [Annex 3 table 7](#). This crash type follows the same pattern, allowing for the volatility resulting from the relatively small number each month.

Crash type: "vehicle emerges from 'give way' junction or private access into path of cyclist"

This is the second most common crash type, accounting for 19%⁶ of cyclists killed or seriously injured in 2011, with the number having increased from 5 in 2008 to 19 in 2011. It is the most common crash type for slight injuries, accounting for 27%⁶, with the number increasing from 81 in 2008 to 95 in 2011.

[Annex 3 table 8](#) shows a breakdown of this crash type into sub-types.

⁵ A crash involving a cycle does not necessarily mean the cyclist was injured, and also does not include 'collided with cycling companion.'

⁶ Excluding casualties where the accident description is not clear.

6. Interventions to address the two crash types

“No other road user involved or collided with cycling companion”

Interventions that focus on increasing cyclists' awareness and skills may be particularly useful for this type of crash. This could be achieved through campaigns, self-help resources and the provision of personalised training. Alongside this, the existing highway fault reporting system could be promoted.

“Vehicle emerges from 'give way' junction or private access into path of cyclist”

This type of casualty may lend itself to a variety of interventions:

1. Awareness campaigns aimed at both cyclists and other road users. This could be along the lines of the established Ride Smart campaign, “don't just look, see”.
2. Promotion of the cycle training that is already available through the County Council. The Bikeability national standard for training addresses the issue of visibility and being prepared for other road-users' mistakes when passing junctions, including the concepts of 'primary' and 'secondary' road positioning. Through charging for this service, this intervention would be self funding. However investment to promote this service would be beneficial.
3. We should develop more self-help resources for those who do not wish, or cannot afford, to access formal training. This could take the form of web-based video training; once again this would need an investment.
4. It may be that some of the locations could be improved by engineering interventions. This would require site specific audits. The County Road Safety Engineering Team undertake analysis and inspection of collision plots to highlight clusters or stretches of roads where there appears to be a high incidence of collisions. A more detailed analysis of the nature of cycle collisions at each site will assess if there are any patterns or common types of collision that could be ameliorated through engineering or speed management measures.
5. Where cycling infrastructure exists or is planned, it needs to be of a standard that:
 - a. Creates continuity through junctions;
 - b. Accommodates cycling in a style compatible with the national training standards, especially moving more to the centre of the lane when passing side roads.

An audit of existing facilities, with a review of design standards, could be undertaken with a view to incorporating improved standards into future schemes.

7. Other factors (no recorded casualty increase in Woking)

Other factors have been looked at to see if any specific characteristics help to explain the change in KSI casualties. In short, none of them do, but they are listed below:

Geographic distribution

1. In general, there is a greater concentration of casualties in built-up areas, as indicated by [Annex 5 map 1](#). There is also randomness associated with crash locations.
2. **Woking cycle town** has seen no change in cyclist KSI casualties. [Annex 5 map 2](#) shows KSI casualties in Woking and they have numbered 6 or 7 each year since 2008. This may indicate that a well considered investment in cycling facilities, training and promotion to increase cycling will not necessarily lead to an increase in cycling casualties.
3. Casualties on the **County-wide cycle facility network** have not yet been analysed in detail as this would be a major piece of work. However, as a very rough guide, the number of police casualty descriptions that appear to refer to the cycle facility network⁷ is 35 out of total of 1,866 descriptions, so by this indicator it does not appear to be a significant factor.

Other vehicle type where cyclist is a casualty

Particularly in London, **HGV-cyclist crashes** are a major concern. This does not appear to be a factor in Surrey as shown by [Annex 6](#).

⁷ Any description that included the phrase 'cycle path', 'cyclepath', 'cycleway', 'cycle track', 'cycletrack', 'cycle route' or 'cycle lane'.

Annex 1: casualty numbers and trends

Table 1. Cyclists Injured in Surrey, 2008-2011

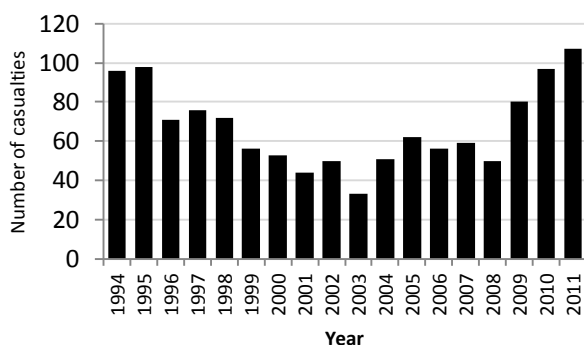
	2008	2009	2010	2011	Grand Total
Fatal	1	2	4	1	8
Serious	49	78	93	106	326
Slight	367	390	353	422	1532
Grand Total	417	470	450	529	1866

Table 2. Cyclists Killed and Seriously Injured in Surrey, 2008-2011

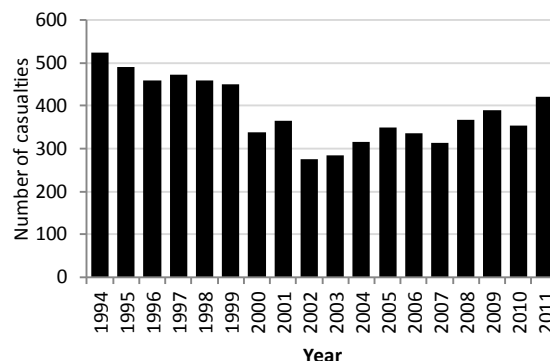
	2008	2009	2010	2011	Grand Total
Fatal	1	2	4	1	8
Serious	49	78	93	106	326
Grand Total	50	80	97	107	334

Table 3. Cyclist Casualties in Surrey, 1994-2011

Cyclists killed or seriously injured



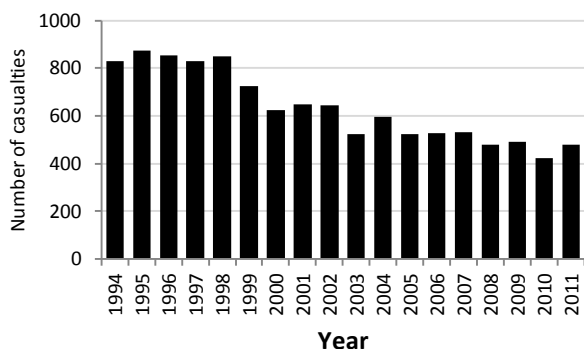
Cyclists slightly injured



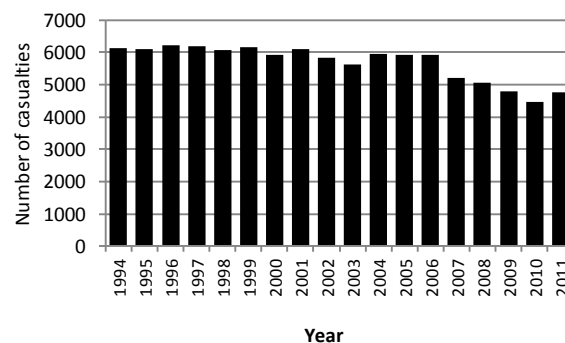
Source: Surrey County Council

Table 4. Road User Casualties, excluding cyclists, in Surrey, 1994-2011

Killed or seriously injured, not cyclists

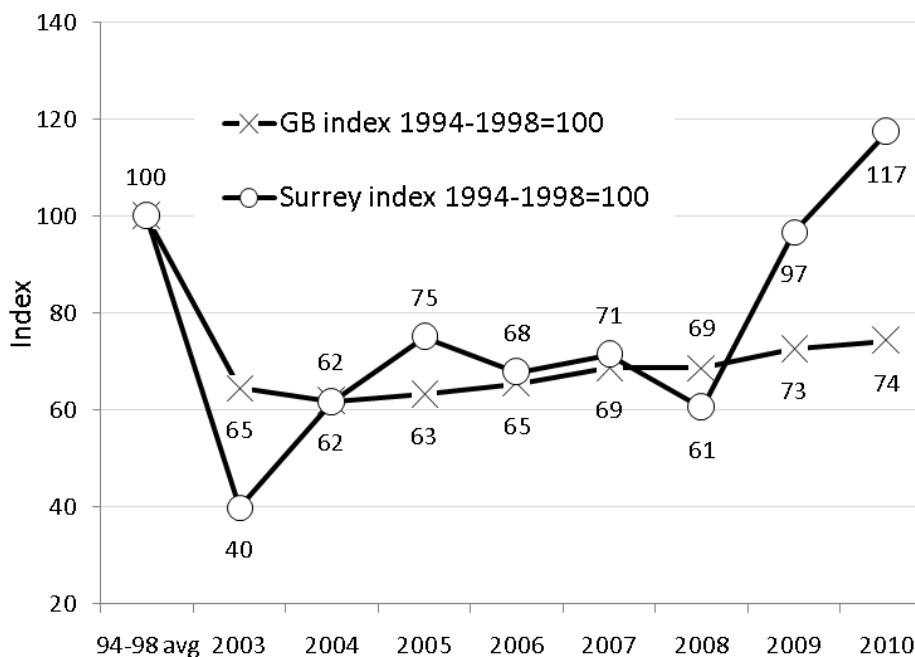


Slightly injured, not cyclists



Source: Surrey County Council

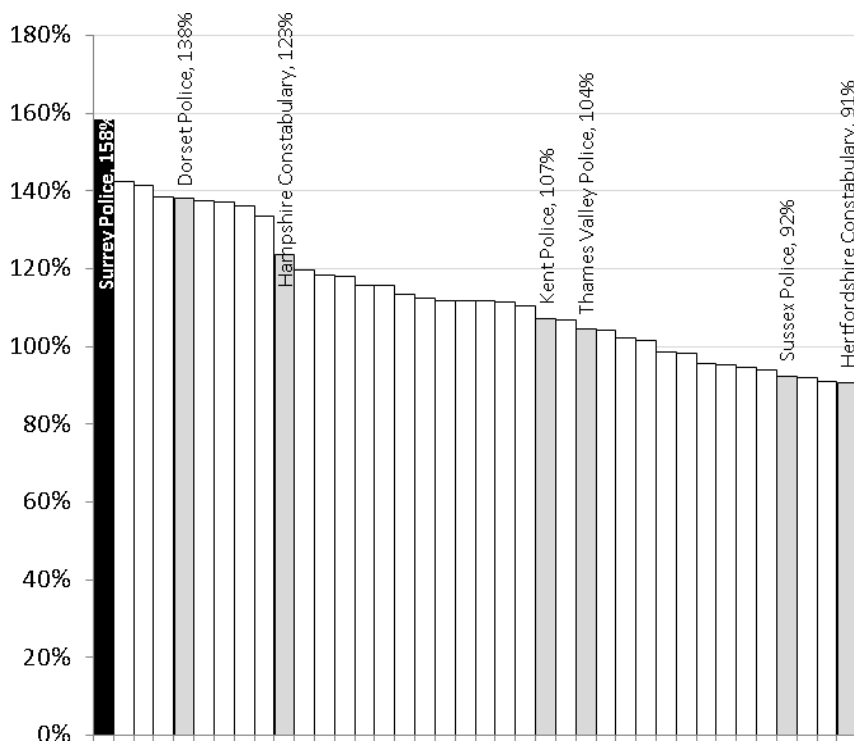
Table 5. Index of Surrey and Great Britain KSI cycle casualties



Source: Surrey County Council and Department for Transport table RAS30011

Table 6. Cyclist KSI casualties by police force, 2010 against 2005-2009 baseline

All casualties, 2005-2009 average = 100%



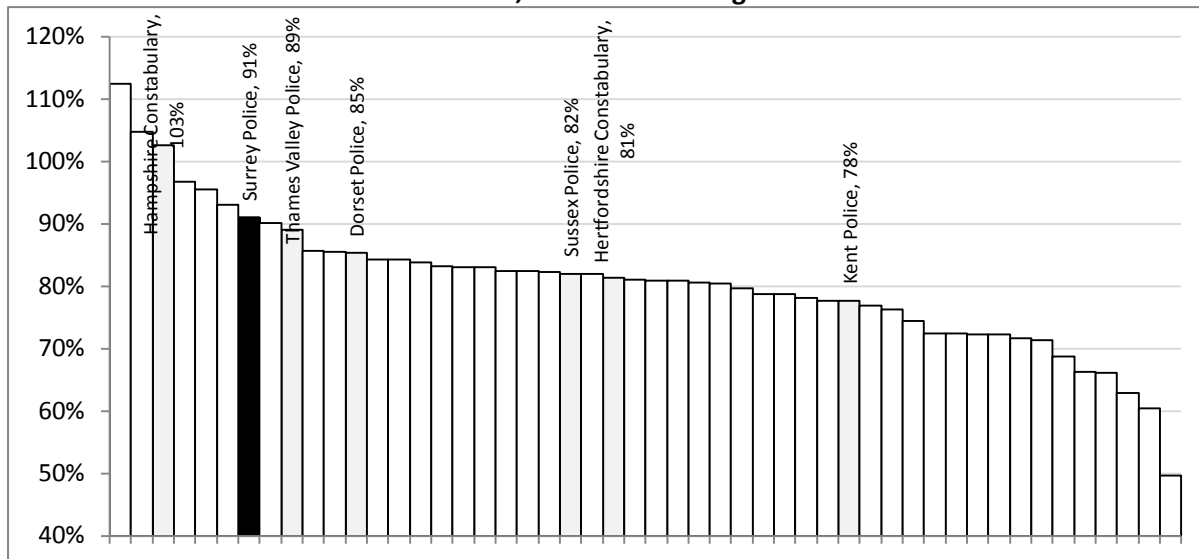
Surrey Police force area is ranked 50th out of 50 police forces for all KSI casualties

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Source: MAST online

Table 7. All KSI casualties by police force, 2010 against 2005-2009 baseline

All casualties, 2005-2009 average = 100%

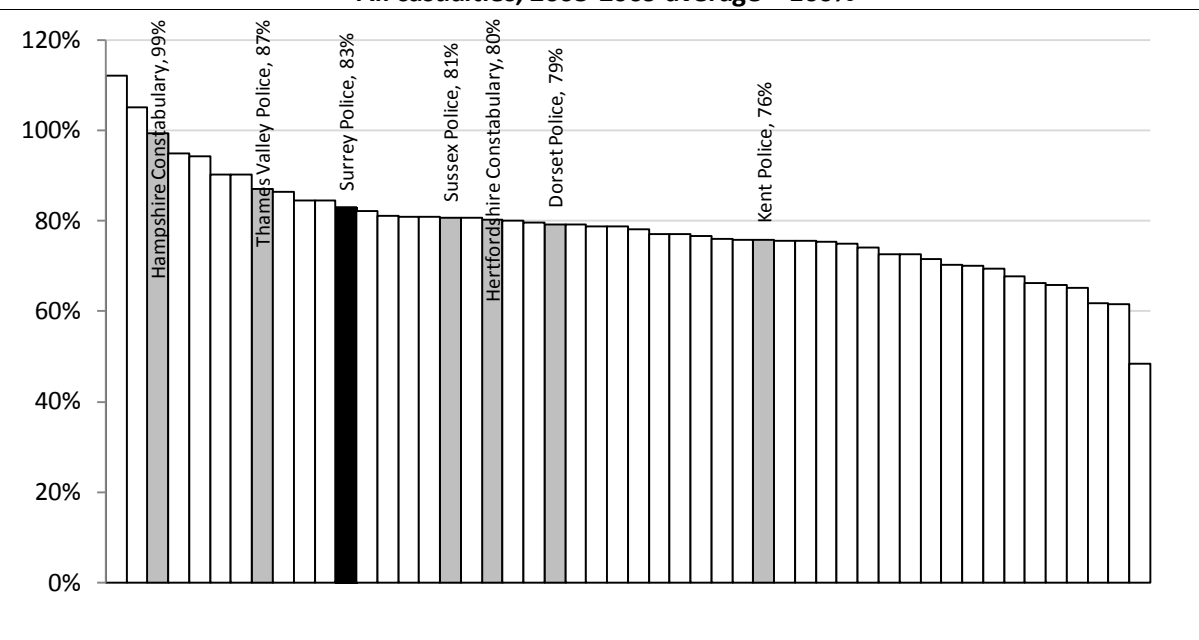


Surrey Police force area is ranked 44th out of 50 police forces for all KSI casualties

Source: MAST online

Table 8. KSI casualties excluding cyclists by police force, 2010 against 2005-2009 baseline

All casualties, 2005-2009 average = 100%



Surrey Police force area is ranked 39th out of 50 police forces for all KSI casualties

Source: MAST online

Annex 2: cycle count data in Surrey

1. Surrey County Council automatic cycle counters

The following automatic cycle counter locations have had data recorded in April, May, June and July in each year 2008-2011. They have been used as the 'full set' data upon which the change in cycling numbers has been calculated:

Location	2008	2009	2010	2011	Grand Total
Bramley, Downs link	258	334	354	347	1293
Guildford Epsom Road	340	360	371	383	1454
Guildford London Road	365	373	422	382	1542
Guildford Shalford Park	290	304	319	333	1246
Guildford Worplesdon Road	168	173	153	165	659
Woking Chertsey Road	119	123	141	149	532
Woking Chobham Road	185	202	218	203	808
Woking south Guildford Road	144	166	192	176	678
Grand Total	1869	2035	2170	2138	8212

These count sites include some of the County's longer continuous cycle paths and cycle lanes.

The other automatic cycle counter locations are listed below. The data have been collected less frequently at these locations – not every year, or in varying months between years – so the numbers cannot be compared against each other:

Location	2008	2009	2010	2011	Grand Total
Addlestone Moor (Woburn Hill), Addlestone	63	63		82	208
Chertsey, A320 Chertsey Road	354	363	237	122	1076
Egham High Street	155	97	121	97	470
Egham, A308 cycle track	165	269		148	582
Egham, Egham Hill	87	87	42	43	259
Guildford Aldershot Road		201	220	223	644
Puttenham, High Street	46	42	44	65	197
Westhumble, A24 cycle track	389	93	459	527	1468
Woking White Rose Lane	293	458	466	493	1710
Grand Total	1552	1673	1589	1800	6614

Source: Surrey County Council

2. Department for Transport counts in Surrey

DfT monitors traffic flows through a combination of automatic traffic counters and manual traffic counts. As at 2010, there were 327 'count points' (excluding motorways) in Surrey,

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with data available for download for the period 2000-2010. Cycle flow data is collected through two-way manual counts at these points, once a year 7am-7pm. However, not every point is monitored every year, making it difficult to conclude on trends over a long period. DfT produces two sets of data, one for major roads and one for minor roads. The tables below show the top ten highest counts in 2010 for each category, compared to the most recent previous count at that location:

DfT major road manual counts - highest counts 2010

Place	Count point	2010 count date	Num of cyclists	Previous most Recent count	Num of cyclists	2010 as % of prev.
A25 Guildford B&Q to Dennis roundabout	36337	Apr-10	341	May-09	317	108%
A25 Guildford B&Q to Stoke Crossroads	7764	Jun-10	238	Oct-08	136	175%
Ewell by-pass near Homebase	7765	Mar-10	201	Jun-09	221	91%
A24 Mickleham between Young Street and Pixham Lane	7784	Jun-10	194	Jul-09	148	131%
A325 Frimley Hospital side of Toshiba rdbt	7780	Mar-10	190	Apr-04	106	179%
A325 Frimley, Blackwater Valley side of Toshiba rdbt	26941	Oct-10	166	Apr-07	171	97%
A246 Guildford Epsom Rd between High St and Waterden Rd	57219	Sep-10	161	Jun-04	125	129%
A320 Chertsey by Pycroft Grange Primary	26925	Jun-10	151	May-02	82	184%
A322 Guildford Onslow St betwen gyratory and Police Stn	48087	Oct-10	134	Oct-07	183	73%
A3100 Godalming by Broadwater Park	78182	May-10	129	May-06	138	93%

DfT minor road manual counts - highest counts 2010

Place	Count point	2010 count date	Num of cyclists	Previous most Recent count	Num of cyclists	2010 as % of prev
B369 Walton Rd East Molesey shops	946152	May-10	496	May-08	716	69%
B3379 Bridge Rd East Molesey	946141	Mar-10	472	Mar-09	498	95%
B374 Heath Road, Weybridge by Brooklands School	946327	Apr-10	462	Apr-09	654	71%
B284 Hook Road, Ewell by driving range Horton Park	946123	Oct-10	406	Oct-09	410	99%
Maybury Road, Woking town centre	946185	Sep-10	352	Sep-09	316	111%
Molesey Road Hersham, south of Barley Mow rdbt	946197	Jul-10	348	Jul-09	682	51%
B3007 Weybourne Road near All Hallows School	946149	Jul-10	322	Jun-09	284	113%
B376 Laleham Road Shepperton, mway bridge	946143	Oct-10	304	Oct-09	434	70%
Long Lane Stanwell near Ashford Hospital	946331	May-10	276	May-10	178	155%
Church Street Leatherhead by registry office	946157	Jun-10	268	Jun-10	306	88%

Raw manual count data is at <http://data.gov.uk/dataset/gb-road-traffic-counts> and count point mapping is at <http://www.dft.gov.uk/traffic-counts/>

Annex 3: crash types

Table 1. All crash types by year, all severities

Crash type	2008	2009	2010	2011	Total
vehicle emerges from 'give way' junction or private access into path of cyclist	86	81	83	114	364
no other road user involved or collided with cycling companion	60	116	97	99	372
STATS19 description not clear	45	41	45	75	206
vehicle approaches from behind into path of cyclist travelling in same direction	55	68	61	64	248
other	19	22	20	30	91
vehicle turns right into side road / access across path of oncoming cyclist	18	12	10	17	57
vehicle turns left into side road / access across the path of cyclist	17	22	11	16	66
cyclist loses control then collides with other vehicle or ped	9	6	9	14	38
cyclist crossing road not at controlled crossing collides with vehicle	20	8	19	13	60
cyclist emerges from 'give way' junction or private access into path of vehicle	18	25	20	12	75
vehicle collides with cyclist on controlled crossing	10	13	17	10	50
cyclist hits parked or stationary vehicle	14	15	9	9	47
cyclist joins carriageway from footway/cycletrack into path of vehicle	8	13	5	9	35
vehicle door opened in the path of cyclist	13	3	14	8	38
other vehicle on wrong side of road	4	7	5	7	23
vehicle turns right across path of cyclist who was passing outside of traffic	1	5	6	6	18
cyclist on wrong side of road or riding wrong way up one-way street	3	3	6	6	18
cyclist into path of pedestrian	1	2	3	4	10
vehicle reverses into cyclist	3	2	2	4	11
cyclist rode through red light	2	0	1	3	6
vehicle U-turns into path of cyclist	3	2	3	3	11
cyclist and vehicle collide whilst both turning right	1	0	0	2	3
vehicle starts or pulls out from kerb into path of cyclist	3	1	1	2	7
cyclist and vehicle collide whilst both turning left	2	2	3	1	8
vehicle drove through red light	0	0	0	1	1
cyclist turning right hit by oncoming vehicle	2	1	0	0	3
Total	417	470	450	529	1866

Source: Surrey County Council

Table 2. Crash type by year, killed and seriously injured casualties

Crash type	2008	2009	2010	2011	Total
no other road user involved or collided with cycling companion	13	35	26	38	112
vehicle emerges from 'give way' junction or private access into path of cyclist	5	14	16	19	54
vehicle approaches from behind into path of cyclist travelling in same direction	14	7	9	13	43
STATS19 description not clear	2	5	4	7	18
other	1	1	2	5	9
other vehicle on wrong side of road	1	2	0	4	7
vehicle collides with cyclist on controlled crossing	0	2	7	4	13
cyclist crossing road not at controlled crossing collides with vehicle	1	2	3	3	9
vehicle turns right into side road / access across path of oncoming cyclist	4	0	3	2	9
vehicle turns left into side road / access across the path of cyclist	2	0	3	2	7

cyclist and vehicle collide whilst both turning right	0	0	0	2	2
cyclist loses control then collides with other vehicle or ped	1	1	5	2	9
vehicle starts or pulls out from kerb into path of cyclist	0	0	0	1	1
cyclist and vehicle collide whilst both turning left	0	1	1	1	3
vehicle turns right across path of cyclist who was passing outside of traffic	0	0	2	1	3
cyclist on wrong side of road or riding wrong way up one-way street	1	0	0	1	2
cyclist joins carriageway from footway/cycletrack into path of vehicle	0	2	0	1	3
cyclist hits parked or stationary vehicle	3	3	2	1	9
vehicle door opened in the path of cyclist	0	0	6	0	6
vehicle reverses into cyclist	0	0	1	0	1
cyclist into path of pedestrian	0	0	1	0	1
vehicle U-turns into path of cyclist	1	0	0	0	1
cyclist rode through red light	1	0	0	0	1
cyclist emerges from 'give way' junction or private access into path of vehicle	0	5	6	0	11
Total	50	80	97	107	334

Source: Surrey County Council

Table 3. Further categorisation of crash type “No other road user involved or collided with cycling companion”

Crash sub-type	All severities					Killed or seriously injured				
	2008	2009	2010	2011	Total	2008	2009	2010	2011	Total
insufficient detail in description	14	28	26	20	88	3	8	6	9	26
collided with fixed object inc. kerb	3	12	5	17	37	1	6	2	6	15
road surface irregularity	4	13	14	14	45	1	5	6	4	16
slippery surface (leaves, ice, debris)	9	6	13	11	39	0	3	1	4	8
lost control at speed or whilst braking	3	12	6	10	31	2	2	4	5	13
collided with cycling companion	8	14	13	8	43	3	2	3	3	11
other	2	10	5	6	23	1	3	1	2	7
alcohol-impaired	4	5	4	4	17	0	1	1	0	2
crossing between footway and carriageway	3	6	4	4	17	1	2	1	2	6
mechanical failure	4	7	4	4	19	0	3	1	2	6
foreign object caught in wheel	3	2	1	1	7	0	0	0	1	1
health event (blackout etc)	3	1	2	0	6	1	0	0	0	1
Total	60	116	97	99	372	13	35	26	38	112

Source: Surrey County Council

Table 4. Comparison of emergency road traffic hospital admissions (HES) and police recorded seriously injured road casualties (STATS19), England 2010

	Pedestrians		Pedal cyclists		Motorcyclists		Car occupants		All road users ¹	
	HES	S19	HES	S19	HES	S19	HES	S19	HES ^p	S19
Total	7,027	4,551	7,476	2,456	6,007	4,240	12,788	7,541	36,184	19,702
No other vehicle involved	0	0	4,605	180	2,519	1,083	4,571	2,387	12,875	8,286
Percent no other vehicle involved	0%	0%	62%	7%	42%	26%	36%	32%	36%	42%

Source: Department of Transport table RAS55001

Table 5. Crashes involving one vehicle where that vehicle was a pedal cycle, by police force and year, 2004-2010

Police force	One vehicle in crash and that vehicle was a pedal cycle							Total crashes involving cyclists 2010	Proportion of crashes that were cycle-only 2010
	2004	2005	2006	2007	2008	2009	2010		
Metropolitan Police	207	125	129	125	134	207	284	4159	7%
Surrey Police	41	62	60	67	65	103	92	455	20%
Cambridgeshire Constabulary	40	36	25	18	38	35	50	491	10%
Hampshire Constabulary	23	18	17	11	21	27	46	721	6%
Lancashire Constabulary	13	19	14	19	19	16	27	459	6%
Nottinghamshire Police	12	34	41	36	36	26	24	336	7%
Thames Valley Police	26	14	18	25	26	22	23	665	3%
Lothian and Borders Police	11	6	9	7	5	7	23	285	8%
Cheshire Constabulary	12	15	7	18	13	18	22	315	7%
Sussex Police	7	8	16	14	24	18	20	517	4%
West Yorkshire Police	14	18	24	21	20	28	19	494	4%
North Yorkshire Police	13	10	18	18	9	18	19	268	7%
Devon and Cornwall Constabulary	15	15	14	9	14	11	13	345	4%
Essex Police	8	12	9	7	10	9	12	375	3%
Kent Police	9	17	14	12	13	17	12	361	3%
Staffordshire Police	7	4	3	2	1	6	12	247	5%
Strathclyde Police	2	5	7	10	10	7	11	270	4%
Norfolk Constabulary	11	5	9	8	10	6	10	182	5%
Humberside Police	16	14	12	6	16	14	9	382	2%
Derbyshire Constabulary	11	4	6	13	5	12	9	258	3%
Grampian Police	2	4	1	1	5	5	9	74	12%
Northumbria Police	8	15	14	10	14	11	8	333	2%
Dorset Police	2	1	1	0	1	1	8	312	3%
South Yorkshire Police	8	5	7	7	10	9	8	285	3%
West Mercia Constabulary	6	15	7	11	12	12	8	244	3%
Lincolnshire Police	5	4	6	1	9	10	8	199	4%
Avon and Somerset	8	11	6	4	7	4	7	613	1%

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	One vehicle in crash and that vehicle was a pedal cycle							Total crashes involving cyclists 2010	Proportion of crashes that were cycle-only 2010
Constabulary									
Warwickshire Police	3	4	4	4	5	6	6	137	4%
Cumbria Constabulary	3	11	9	4	2	7	6	109	6%
Northern Constabulary	5	4	3	5	5	5	6	33	18%
West Midlands Police	1	5	7	0	5	5	5	548	1%
Hertfordshire Constabulary	12	11	13	9	7	4	5	242	2%
Suffolk Constabulary	3	7	5	3	4	6	5	174	3%
North Wales Police	5	2	5	1	5	1	5	107	5%
Merseyside Police	6	8	6	0	2	2	4	326	1%
Leicestershire Constabulary	2	7	4	5	3	6	4	309	1%
Gloucestershire Constabulary	1	2	4	5	6	3	4	145	3%
Tayside Police	4	5	0	1	1	2	4	39	10%
Greater Manchester Police	12	14	7	8	9	11	3	744	0%
Bedfordshire Police	2	3	1	2	3	2	3	145	2%
Wiltshire Police	4	1	4	0	2	0	2	140	1%
Dyfed-Powys Police	3	0	4	5	2	2	2	61	3%
Northamptonshire Police	1	0	4	1	2	1	1	107	1%
Gwent Police	3	1	2	2	1	1	1	58	2%
Central Scotland Police	3	1	1	1	0	0	1	43	2%
South Wales Police	2	2	1	1	3	1	0	227	0%
Cleveland Police	1	0	0	3	2	1	0	108	0%
Durham Constabulary	4	1	2	1	1	3	0	105	0%
Fife Constabulary	2	1	1	0	0	0	0	35	0%
Dumfries and Galloway Constabulary	2	1	1	0	0	1	0	17	0%

Source: MAST online

Table 6. Cyclist casualties by year and day of week, all severities

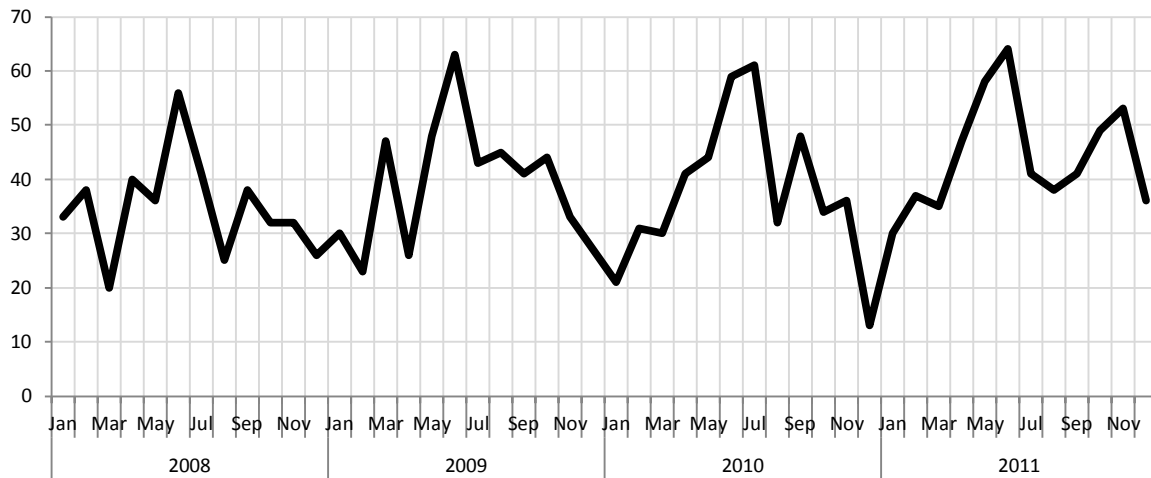
All cyclist casualties				
	2008	2009	2010	2011
Monday	14%	12%	15%	14%
Tuesday	17%	13%	13%	19%
Wednesday	18%	16%	15%	13%
Thursday	16%	14%	15%	16%
Friday	14%	14%	14%	11%
Saturday	10%	14%	15%	12%
Sunday	11%	17%	13%	15%
Total	100%	100%	100%	100%

	2008	2009	2010	2011
Monday	13%	11%	10%	10%
Tuesday	17%	13%	9%	9%
Wednesday	8%	11%	8%	13%
Thursday	8%	6%	7%	9%
Friday	17%	15%	12%	8%
Saturday	10%	12%	27%	20%
Sunday	27%	32%	26%	30%
Total	100%	100%	100%	100%

Source: Surrey County Council

Table 7. Cyclist Casualties by month and year, all severities

a. All cyclist casualties



Source: Surrey County Council

b. Cyclist casualties where crash type is “no other vehicle involved or collided with cycling companion”.

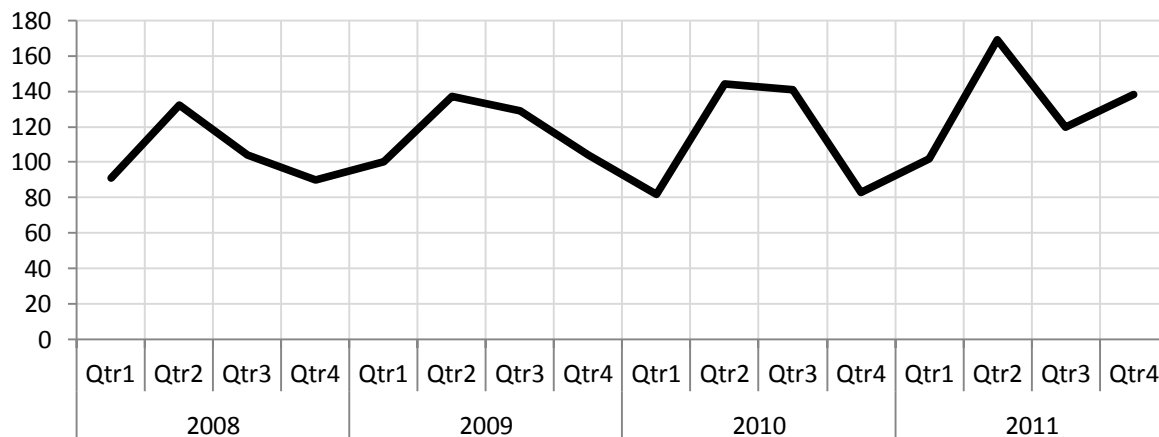


Table 8. Further categorisation of crash type “vehicle emerged from ‘give way’ junction or private access into path of cyclist”

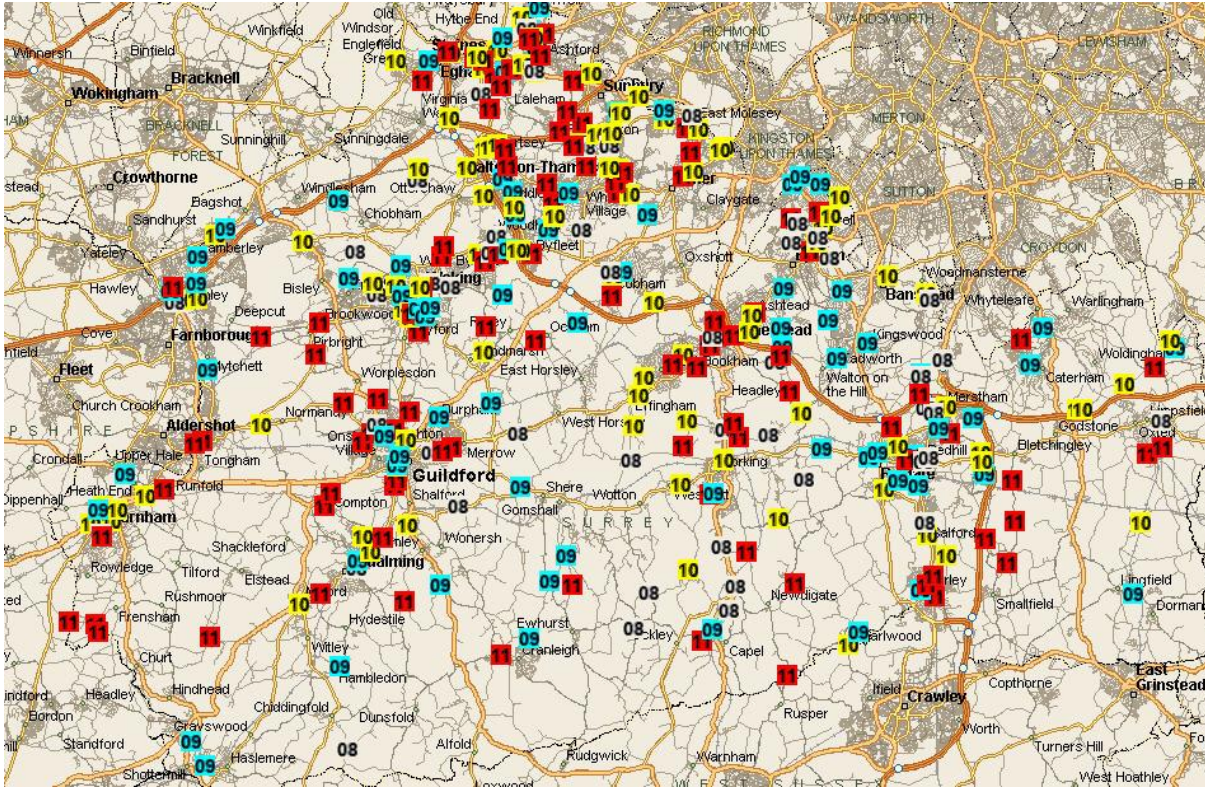
All severities	2008	2009	2010	2011	Total
vehicle emerges from T-junction or crossroads	37	41	45	59	182
vehicle enters roundabout	27	25	17	39	108
cyclist on carriageway, vehicle emerges from private access	11	8	14	8	41
cyclist on footway or cycle path, vehicle emerges from drive	10	6	7	7	30
insufficient detail in description	1	1	0	1	3
Total	86	81	83	114	364

Killed and seriously injured	2008	2009	2010	2011	Total
cyclist on carriageway, vehicle emerges from private access	0	2	3	1	6
cyclist on footway or cycle path, vehicle emerges from drive	0	0	2	0	2
vehicle emerges from T-junction or crossroads	5	6	7	11	29
vehicle enters roundabout	0	6	4	7	17
Total	5	14	16	19	54

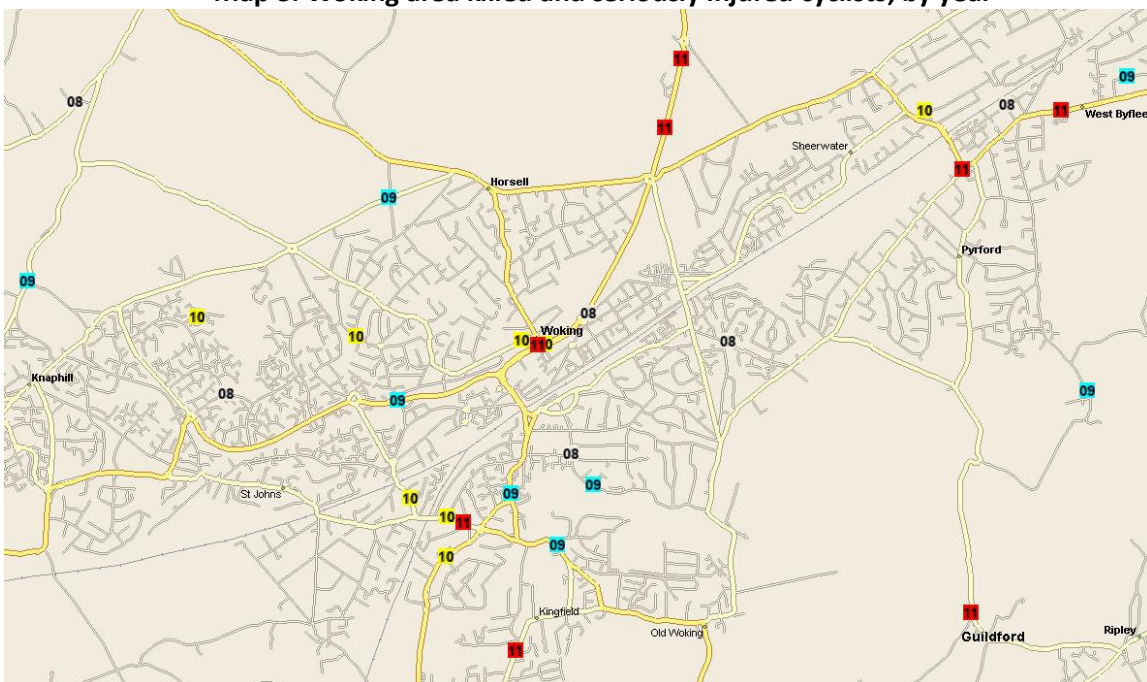
Annex 5: casualty location maps

Each of the maps shows a square for a single casualty; the square is colour-coded and numbered corresponding to the year – 2008 to 2011 is covered.

Map 1: Killed and seriously injured cyclists in Surrey, by year



Map 3: Woking area killed and seriously injured cyclists, by year



Annex 6: other vehicle involved in crashes where cyclist was injured, all severities, 2008 to 2011

Row Labels	2008	2009	2010	2011	Grand Total
Bus or coach (17 or more passenger seats)	5	2	4	3	14
Car	271	291	288	348	1198
Car - V3 Bus or coach (17 or more passenger seats)	0	0	0	1	1
Car - V3 Car	0	0	0	1	1
Goods vehicle 3.5 tonnes maximum gross weight (mgw) and under	12	11	16	19	58
Goods vehicle 7.5 tonnes mgw and over	2	1	4	3	10
Goods vehicle over 3.5 tonnes and under 7.5 tonnes mgw	0	3	1	5	9
Minibus (8 - 16 passenger seats)	2	0	0	0	2
Motorcycle 50cc and under	0	0	0	1	1
Motorcycle over 125cc and up to 500cc	0	1	1	2	4
Motorcycle over 500cc	1	2	2	1	6
Motorcycle over 50cc and up to 125cc	0	0	1	1	2
Other Motor Vehicle	17	11	2	4	34
Other Non-Motor Vehicle	0	0	1	0	1
Pedal Cycle	13	22	20	7	62
Not recorded	91	125	110	131	457
Other	2	1	0	2	5
Grand Total	417	470	450	529	1866

Source: Surrey County Council